

We claim:

- Sub A3 1. A method for file sharing over a network, comprising:
- receiving a request for a first file from a first computer to a second computer via the network, wherein the first file is on a third computer;
- 5 determining whether a user of the first computer is permitted access to the first file;
- creating a link on the second computer to the first file in response to the request for the first file if the user is permitted access;
- creating a web page description including an URL to the link; and
- 10 transmitting the web page description to the first computer via the network.
2. The method of Claim 1, wherein the link is a Unix symbolic link.
3. The method of Claim 1, wherein the link is a text file containing a path to the first file on the third computer.
- 15 4. The method of Claim 1, further comprising authenticating the identity of the user prior to receiving the request for the first file.
5. The method of Claim 4, further comprising creating a directory having a directory name comprising at least partially of a random string on the second computer subsequent to authenticating the identity of the user and prior to receiving
- 20 the request for the first file, wherein creating the link on the second computer comprises saving the link in the directory.
- Sub A3 6. The method of Claim 5, further comprising creating a random session identification for the client subsequent to authenticating the identity of the user and prior to creating the directory, wherein the directory name comprising at least
- 25 partially of the session identification.

7. The method of ~~Claim 5~~, further comprising deleting the directory after transmitting the web page description.

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8. The method of Claim 1, further comprising:

determining if a first directory on the third computer has reached a predetermined capacity; and

if the first directory has reached the predetermined capacity, creating on the third computer a second directory with a second directory name that is sequentially incremented from a first directory name of the first directory.

9. The method of Claim 1, further comprising the acts of:

searching for a first directory on the third computer that was last backed up and a second directory that was most recently created; and

backing up all directories on the third computer having directory names sequentially between a first directory name of the first directory and a second directory name of the second directory.

10. The method of Claim 1, further comprising backing up a directory on the third computer that was previously backed up if the number of files currently in the directory is substantially less than the original number of files in the directory.

11. The method of Claim 10, wherein the number of files currently in the directory is substantially less than the original number of files in the directory if the ratio of the number of files currently in the directory to the original number of files in the directory is less than a predetermined amount.

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12. The method of Claim 1, further comprising:

receiving a second file from the first computer to the second computer; and

moving the second file to the third computer.

13. The method of Claim 12, further comprising saving the second file in the third computer with a file name that is sequentially incremented from a file name of a third file that was previously saved in the third computer.

14. A computer-readable medium carrying a program for file sharing over a network, comprising:

a first instruction for receiving a request for a first file from a first computer to a second computer via the network, wherein the first file is on a third computer;

10 a second instruction for determining whether a user of the first computer is permitted access to the first file;

a third instruction for creating a link on the second computer to the first file in response to the request for the first file if the user is permitted access;

15 a fourth instruction for creating a web page description including an URL to the link; and

a fifth instruction for transmitting the web page description to the first computer via the network.

15. The computer-readable medium of Claim 14, wherein the link is a Unix symbolic link.

20 16. The computer-readable medium of Claim 14, wherein the link is a text file containing a path to the first file on the third computer.

17. The computer-readable medium of Claim 14, further comprising a sixth instruction for authenticating the identity of the user prior to receiving the request for the first file.

25 18. The computer-readable medium of Claim 17, further comprising a seventh instruction for creating a directory having a directory name comprising a random

string on the second computer subsequent to authenticating the identity of the user and prior to receiving the request for the first file, wherein the third instruction comprises saving the link in the directory.

19. The computer-readable medium of Claim 18, further comprising an eighth  
5 instruction for creating a random session identification for the client subsequent to authenticating the identity of the user and prior to creating the directory, wherein the directory name comprising at least partially of the session identification.

20. The computer-readable medium of Claim 18, further comprising a ninth instruction for deleting the directory after transmitting the web page description.

10 21. The computer-readable medium of Claim 14, further comprising:

a sixth instruction for determining if a first directory on the third computer has reached a predetermined capacity; and

a seventh instruction for creating on the third computer a second  
15 directory with a second directory name that is sequentially incremented from a first directory name of the first directory if the first directory has reached the predetermined capacity.

22. The computer-readable medium of Claim 14, further comprising the acts of:

a sixth instruction for searching for a first directory on the third  
20 computer that was last backed up and a second directory that was most recently created; and

a seventh instruction for backing up all directories on the third computer having directory names sequentially between a first directory name of the first directory and a second directory name of the second directory.

23. The computer-readable medium of Claim 14, further comprising a sixth  
25 instruction for backing up a directory on the third computer that was previously

backed up if the number of files currently in the directory is substantially less than the original number of files in the directory.

24. The computer-readable medium of Claim 23, wherein the number of files currently in the directory is substantially less than the original number of files in the directory if the ratio of the number of files currently in the directory to the original number of files in the directory is less than a predetermined amount.

25. The computer-readable medium of Claim 14, further comprising:

a sixth instruction for receiving a second file from the first computer to the second computer; and

a seventh instruction for moving the second file to the third computer.

26. The computer-readable medium of Claim 25, further comprising an eighth instruction for saving the second file in the third computer with a file name that is sequentially incremented from a file name of a third file that was previously saved in the third computer.

27. A system for file sharing over a network, comprising:

a file management agent;

a second storage coupled to the file management agent, the second storage including a file;

a first storage, the first storage including:

a temporary directory; and

a link to the file in the temporary directory;

a file transfer agent coupled to the file management agent and the first storage; and

wherein the file transfer agent transmits a web page description including the link and subsequently deletes the temporary directory.

28. The system of Claim 27, wherein the file transfer agent transmits the web page description to a client through a network.

5 29. The system of Claim 27, further comprising a network, the file transfer agent being coupled to the file management agent through the network.

30. The system of Claim 27, further comprising:

a back up agent coupled to the second storage for backing up the second storage; and

10 a third storage coupled to the back up agent, the third storage including back up copies of directories and files in the second storage.

31. The system of Claim 27, further comprising a file control agent coupled to the file management agent, the file control agent providing save file locations and instructions to create new directories.

15 32. The system of Claim 27, further comprising:

a file index agent for accessing databases, the file index agent coupled to the file management agent; and

a database coupled to the file index agent, the database providing directory and file information in the second storage.

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